



Illinois EPA's Involvement in Groundwater Issues and Groundwater Contamination in Downers Grove January 2002

The Illinois Environmental Protection Agency (Illinois EPA) has been actively evaluating the health of the State's groundwater resources for many years. On January 1, 1985, the Illinois Environmental Protection Act (Act) was amended (Public Act 83-1268) to require the Illinois Department of Natural Resources (DNR) and the Illinois EPA to conduct a study of the groundwater quality in Illinois. The study included the first statewide ambient groundwater monitoring to determine the quality of groundwater. This is referred to as ambient water quality or ambient monitoring. Ambient monitoring is not the same as the testing of finished or treated water that is distributed to consumers at the tap. Finished water testing is regulated through the Safe Drinking Water Act (SDWA) and is administered through Illinois EPA's Division of Public Water Supplies.

Since the adoption of the Illinois Groundwater Protection Act (IGPA) in 1987, the Illinois EPA has been investigating the potential for volatile organic compound (VOC) contamination in the State's groundwater. VOCs represent a family of chemicals that includes degreasing and cleaning solvents such as trichloroethylene (TCE) and tetrachloroethylene (PCE). These and other solvents were used in large quantities for many years by both commercial (e.g., dry cleaners, print shops, auto repair shops) and industrial (e.g., metal parts fabricating) businesses as well as U.S. Department of Defense sites. Until environmental laws were passed in the 1980s that required stricter waste management practices, businesses or private individuals may have paid haulers to dispose of these waste solvents or they may have dumped the waste solvents on their own property. Any time solvents are disposed of on the ground, they can move into groundwater over time as rainwater washes them from the upper soils.

Data from ambient monitoring studies were presented during statewide public input sessions held by the Illinois EPA during 1985. The data were also presented in public hearings conducted by the Illinois Pollution Control Board in 1986 (including a hearing in Lisle on May 15, 1986) on the Illinois Groundwater Protection Plan. The Illinois Groundwater Protection Plan was prepared by the Illinois EPA under a mandate in the Environmental Protection Act. The data from the ambient monitoring was ultimately used to justify the need for the IGPA. It was also used by Illinois EPA to prepare the document entitled Groundwater in Illinois - A Threatened Resource, A Briefing Paper Regarding the Need for Groundwater Protection Legislation and published by Illinois EPA in April 1987. Table I of that document specifically detailed the information associated with VOC contamination in groundwater in Downers

Grove.

The IGPA required the development of well site survey reports to provide information on groundwater quality and potential sources of contamination relative to 1200 community water supplies (CWS) in Illinois. These reports were sent to the county, the municipality, any applicable regional planning committee and the owners and operators of the CWS well that was the subject of the report. The well site survey report for Downers Grove, including information on Wells #6 and #8, was provided to Downers Grove on April 14, 1989. The well site survey report for the Belmont-Highwood Public Water District (PWD) wells was provided to Belmont-Highwood PWD on June 17, 1992. The well site survey report for the Maple Hill Improvement Association wells was provided to that association on June 25, 1992. A copy of each of these well site survey reports was also simultaneously sent to the county board.

Included with each of the well site survey reports is a recommendation that counties or municipalities conduct a groundwater protection needs assessment as authorized by the Environmental Protection Act. Under the Act, a needs assessment shall include at a minimum:

- Ø evaluation of the protection provided to resource groundwater;
- Ø identification of potential groundwater contamination sources;
- Ø evaluation of the hazard of potential sources;
- Ø evaluation of the extent to which local controls provide groundwater protection; and
- Ø identification of practical contingency measures including provisions for alternative drinking water supplies to be implemented in the event of contamination.

The Interagency Coordinating Committee on Groundwater (ICCG) was also established by the IGPA. The State agencies that make up the committee are the Illinois EPA, Illinois Department of Public Health, Illinois Department of Commerce and Community Affairs, Illinois Department of Agriculture, Illinois DNR, including the Water and Geological Surveys, Office of Water Resources and Office of Mines and Minerals, the Office of the State Fire Marshal, the Illinois Department of Nuclear Safety, and Illinois Emergency Management Agency. The ICCG is required to provide biennial reports to the Governor and the General Assembly on the progress of groundwater protection in Illinois. This includes evaluating the health or quality of groundwater resources in the state and developing a unified state response to groundwater threats.

The ICCG included the results of all ambient water quality monitoring in its first biennial interagency report in 1990. This report was made available to the public by providing copies to health departments and regional groundwater protection planning committees. This report was also distributed at groundwater protection workshops held throughout the State. The Illinois EPA also provided copies to members of the public upon request.

Did Illinois EPA gather baseline information regarding potential threats to community well water supplies in DuPage County?

Yes. Between 1989 and 1995, the Illinois EPA prepared individual well site surveys for numerous public water supplies in DuPage County. These reports contained information about the quality of groundwater in a particular area of the county, named possible contamination threats to the groundwater, and described the geologic setting and aquifer. The reports also gave recommendations about wellhead protection, such as establishing "set back zones" that prohibit industry from locating near a community water supply well. As previously noted, these documents were provided to the county boards as required by law.

Has the Illinois EPA investigated possible sources of contamination in the Downers Grove and Belmont-Highwood groundwater wells and the surrounding area?

Yes. The Illinois EPA investigated the Downers Grove well contamination and suspected surface water contamination in 1987 and 1988. The U.S. EPA also investigated the contamination in 1991. Downers Grove wells #6 and #8 exhibited TCE contamination. Both wells were shut down. Well #8 was sealed and abandoned in 1991. Well #6 was sealed and abandoned in 1993. During its investigation, the Illinois EPA did not find any obvious sources of surface contamination. The contractor conducting the U.S. EPA investigation was not aware of private water wells in the area of unincorporated Downers Grove. Because the Downers Grove CWS was switching from groundwater to Lake Michigan water, the U.S. EPA contractor recommended no further action. The U.S. EPA concurred with this recommendation on June 23, 1992.

In 1993, the contamination of the Belmont-Highwood PWD wells was discovered. The Belmont-Highwood PWD service area was annexed by Downers Grove and connected to Lake Michigan water in 1995. The site investigation for possible sources of contamination done for the Downers Grove wells during 1987, 1988 and 1991 included much of the same area that surrounds the Belmont-Highwood wells.

As a result of the recent investigation of the groundwater contamination in Lisle, the Illinois EPA became aware of the large number of private wells in the Downers Grove area. In the summer of 2001, the Illinois EPA began an extensive investigation of potential sources of groundwater contamination in this area. The Illinois EPA is currently conducting private well sampling to identify the extent of the contamination. As part of the source investigation, the Illinois EPA has performed an extensive survey of businesses and industries in the area that use or may have used chlorinated solvents, and has issued a number of Information Request Letters to local businesses. The U.S. EPA has also joined the Illinois EPA in its efforts to identify the potential sources of the groundwater contamination.

Did Illinois EPA attempt to notify private well owners in the areas where threats to groundwater were apparent?

The Illinois EPA, by law, has been given the authority to regulate public water supplies, which are water supplies that serve at least 15 connections or at least 25 people for greater than 60 days per year. The authority given to the Illinois EPA does not extend to the regulation of individual private water wells. The Illinois Department of Public Health and local health departments have authority over the location, construction and modification of private water wells.

As explained above, the Illinois EPA investigated the contamination in Downers Grove public water supply wells #6 and #8. The Illinois EPA, as was the case with the U.S. EPA and the U.S. EPA's contractor, did not have any information about private water wells in the Downers Grove area. The Illinois EPA did not notify individual private well owners of the groundwater contamination in the Downers Grove area since it did not know that those wells existed. However, as required, the Illinois EPA provided information on the Downers Grove public water supply well contamination to the county since counties are more likely to have information about where private water wells are located.

What is being done to address the potential for contamination of private wells from existing contamination sources?

In addition to the efforts of the Illinois EPA described previously, the Interagency Coordinating Committee on Groundwater is developing a procedure to coordinate the response of the state and local governmental bodies to specific incidents of groundwater pollution and coordinate dissemination of information among agencies responsible for the response.

Will the State of Illinois provide any funding mechanism for private well owners whose wells are contaminated?

Illinois EPA administers a program for revolving, low interest loans to municipalities or counties who need to provide infrastructure (e.g., new service-area water mains). The Governor's newly formed Action Team on Groundwater Issues will explore other possibilities as well. The Action Team, which is comprised of representatives from the Illinois Attorney General's Office, the Illinois Department of Public Health, the Village of Downers Grove, DuPage County, Illinois EPA and U.S. EPA, held its first meeting on January 14, 2002.

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